CLAIMS

1. (Original) A pharmaceutical composition comprising a bone morphogenic protein antagonist or a prodrug thereof, or a bone morphogenic protein receptor antagonist or a prodrug thereof, or a combination thereof in an amount sufficient to inhibit or reduce vascular inflammation by interfering with binding of bone morphogenic protein or a fragment thereof to bone morphogenic protein receptors.

2. (Original) The pharmaceutical composition of claim 1, wherein the bone morphogenic protein antagonist comprises a modified bone morphogenic polypeptide or a prodrug thereof in an amount sufficient for inhibiting vascular inflammation by competitively inhibiting binding of bone morphogenic protein to endothelial bone morphogenic protein receptors, wherein binding of said modified bone morphogenic protein to said bone morphogenic protein receptor does not activate said receptor.

3. (Original) The composition of claim 1, wherein the bone morphogenic protein receptors are vascular cell bone morphogenic protein receptors.

4. (Original) The composition of claim 3, wherein the bone morphogenic protein antagonist comprises a polypeptide of noggin, chordin, DAN, or veinless.

5. (Original) The composition of claim 1, wherein the bone morphogenic protein antagonist consists of the N-terminal fragment of noggin, chordin, DAN or veinless.

6. (Original) The composition of claim 1, wherein the bone morphogenic protein is bone morphogenic protein 4.

7. (Original) The composition of claim 1, further comprising a second therapeutic agent.

8. (Original) The composition of claim 7, wherein the second therapeutic agent comprises an anti-inflammatory agent, cholesterol lowering agent, or a combination thereof.

9. (Original) A vector comprising a promoter operably linked to a polynucleotide encoding a

modified bone morphogenic polypeptide that binds to a bone morphogenic protein receptor without activating said receptor.

10. (Original) The vector of claim 9, wherein the promoter is an inducible promoter.

11. (Original) The vector of claim 10, wherein the promoter is induced in vascular cells.

12. (Original) The vector of claim 11, wherein the vascular cells are endothelial cells.

13. (Original) The composition of claim 1 further comprising a pharmaceutically acceptable carrier.

14. (Original) A medical device comprising a bone morphogenic protein antagonist, or a bone morphogenic protein receptor antagonist, or a combination thereof, wherein the device releases an amount of antagonist sufficient to inhibit or reduce vascular inflammation by interfering with or reducing the binding of bone morphogenic protein or a fragment thereof to a bone morphogenic protein receptor.

15. (Original) The medical device of claim 14, wherein the device is a vascular stent.

16. (Original) The device of claim 14, wherein the release of antagonist is sustained over a period of time.

17. (Original) A method of decreasing or inhibiting monocyte adhesion to vascular cells comprising inhibiting binding of bone morphogenic polypeptide to said vascular cells by contacting bone morphogenic polypeptide present in vascular fluid or tissue in contact with said vascular cells with a bone morphogenic polypeptide antagonist in an amount sufficient to inhibit or reduce the expression of cell adhesion molecules by said vascular cells.

18. (Original) A method of inhibiting a vascular inflammatory response comprising contacting extracellular vascular fluid or vascular cells with an amount of bone morphogenic protein antagonist or bone morphogenic protein receptor antagonist sufficient to inhibit or reduce binding of bone morphogenic protein to said vascular cells or to vascular cells in contact with

said vascular fluid.

19. (Original) The method of claim 18, wherein the antagonist is an inhibitory polynucleotide specific for a bone morphogenic polypeptide or bone morphogenic protein receptor.

20. (Original) A method for treating vascular inflammation comprising administering to a host an amount of bone morphogenic protein antagonist or bone morphogenic protein receptor antagonist sufficient to inhibit binding of bone morphogenic protein or a fragment thereof to vascular cells of the host.

21. (Original) A method for treating atherosclerosis comprising administering to a host an amount of bone morphogenic protein antagonist or bone morphogenic protein receptor antagonist sufficient to inhibit binding of bone morphogenic protein or a fragment thereof to vascular cells of the host.

22. (Original) The method of claim 20, wherein the bone morphogenic protein antagonist or bone morphogenic protein receptor antagonist is also sufficient to inhibit or reduce the expression of cell surface adhesion polypeptides.

23. (Original) The method of claim 20, wherein the bone morphogenic protein antagonist comprises a polypeptide of noggin, chordin, DAN, or veinless.

24. (Original) The method of claim 23, wherein the bone morphogenic protein antagonist consists of an N-terminal polypeptide fragment of noggin, chordin, DAN or veinless.

25. (Original) The method of claim 20, wherein the bone morphogenic protein is bone morphogenic protein 4.

26. (Original) The method of claim 20, further comprising a second therapeutic agent.

27. (Original) The method of claim 26, wherein the second therapeutic agent comprises an additional anti-inflammatory agent, cholesterol lowering agent, or a combination thereof.

28. (Original) The method of claim 20 comprising inserting a medical device into a vascular conduit of a host, wherein the medical device includes a bone morphogenic protein antagonist, or a bone morphogenic protein receptor antagonist, or a combination thereof, wherein the device releases an amount of antagonist sufficient to inhibit or reduce vascular inflammation by interfering with or reducing the binding of bone morphogenic protein or a fragment thereof to a bone morphogenic protein receptor.

29. (Amended) The pharmaceutical composition of claim 1, wherein the pharmaceutical composition comprises a bone morphogenic protein antagonist or a prodrug thereof that includes at least a portion of a polypeptide corresponding to ~~any one of SEQ. ID. Nos. 1~~ SEQ ID NO: 1.